

Universitatea de Științele Vieții „Regele Mihai I” din Timișoara



GRAPE CULTIVAR “BEGA”

ALEXANDROV EUGENIU, DOBREI ALIN, BOTNARI VASILE, DOBREI ALINA, GĂINĂ BORIS

Institute of Genetics, Physiology and Plant Genetics in Chisinau, Republic of Moldova, University of Life Sciences "King Mihai I" from Timișoara, Romania

The new genotype represents a grape cultivar developed for industrial processing, suitable for both wine and juice production.

Ampelographic description

The mature leaves are palmate-lobed and green in colour. The leaf blade has a revolute profile, with pronounced teeth along the leaf edges. The petiole sinus is wide open, a characteristic that aids in cultivar identification. The clusters are medium to large, cylindrical-conical in shape, uniaxial, single-winged, and loosely structured, which allows for better aeration of the berries. Typically, there are two clusters per shoot, ensuring consistent yields.



Ampelographic description

The clusters are resistant to handling and can be transported and stored fresh without significant quality loss. The berries are medium-sized (averaging about 60 mg), elongated, evenly distributed within the cluster, and display an attractive blue-violet skin colour. The pulp is colourless, juicy, and firm, with a pleasantly neutral taste, and separates easily from the 1–2 seeds despite slight adherence to the skin.



Ripening period: Medium, allowing flexibility in harvest timing.
Resistance: The cultivar is drought-tolerant and resistant to low winter temperatures.
Yield: Depending on cultivation practices, 'Bega' produces 5–7 kg per vine, equivalent to 14–16 tons per hectare.



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CROSS-BORDER AMBIENT AIR MONITORING NETWORK

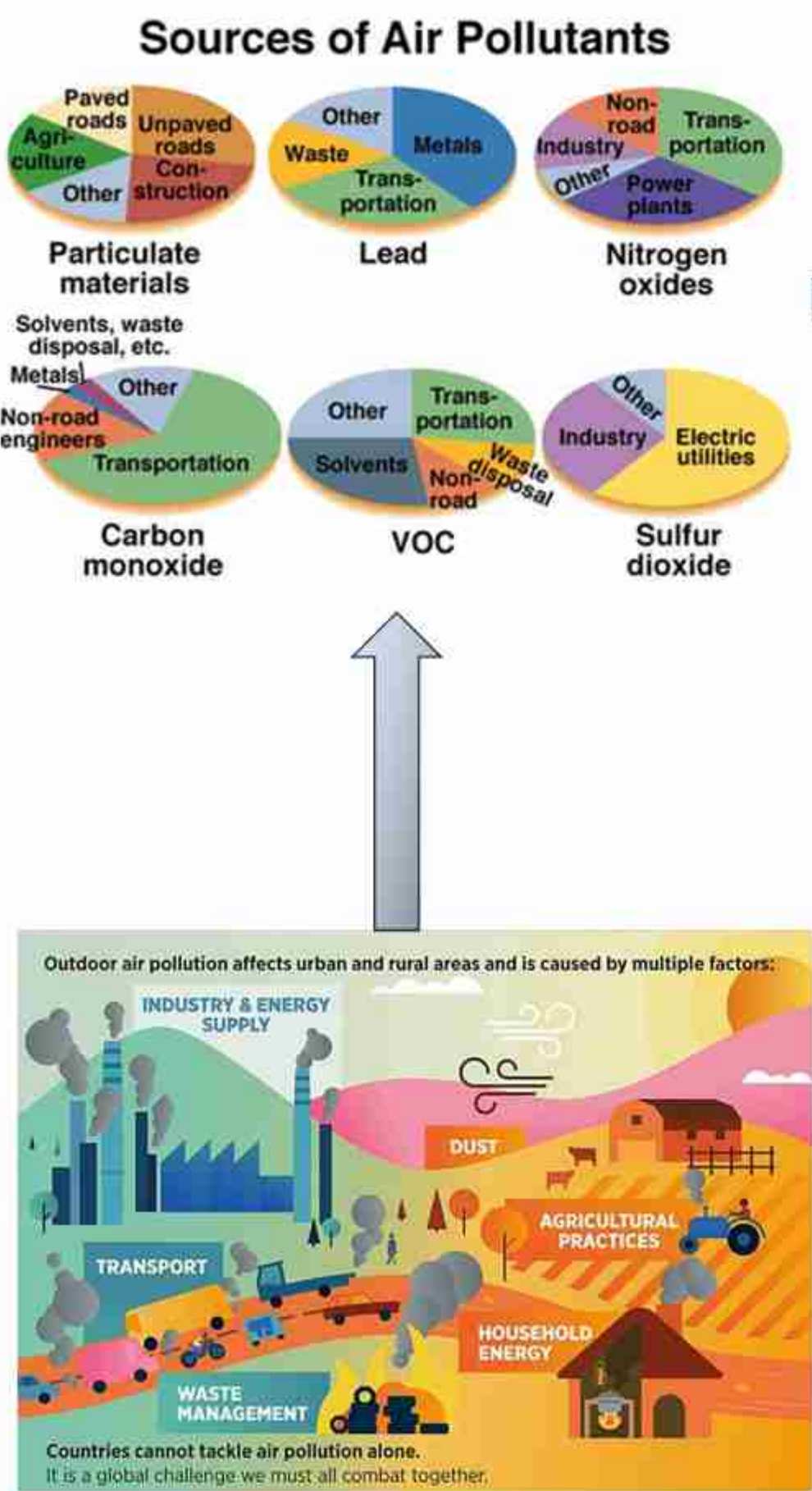
Project ID:RORS00090

Program priority: Environmental Protection and Risk Management

SPECIFIC OBJECTIVES:

ENHANCING PROTECTION AND PRESERVATION OF NATURE BIODIVERSITY AND GREEN INFRASTRUCTURE, INCLUDING IN URBAN AREAS AND REDUCING ALL FORMS OF POLLUTION

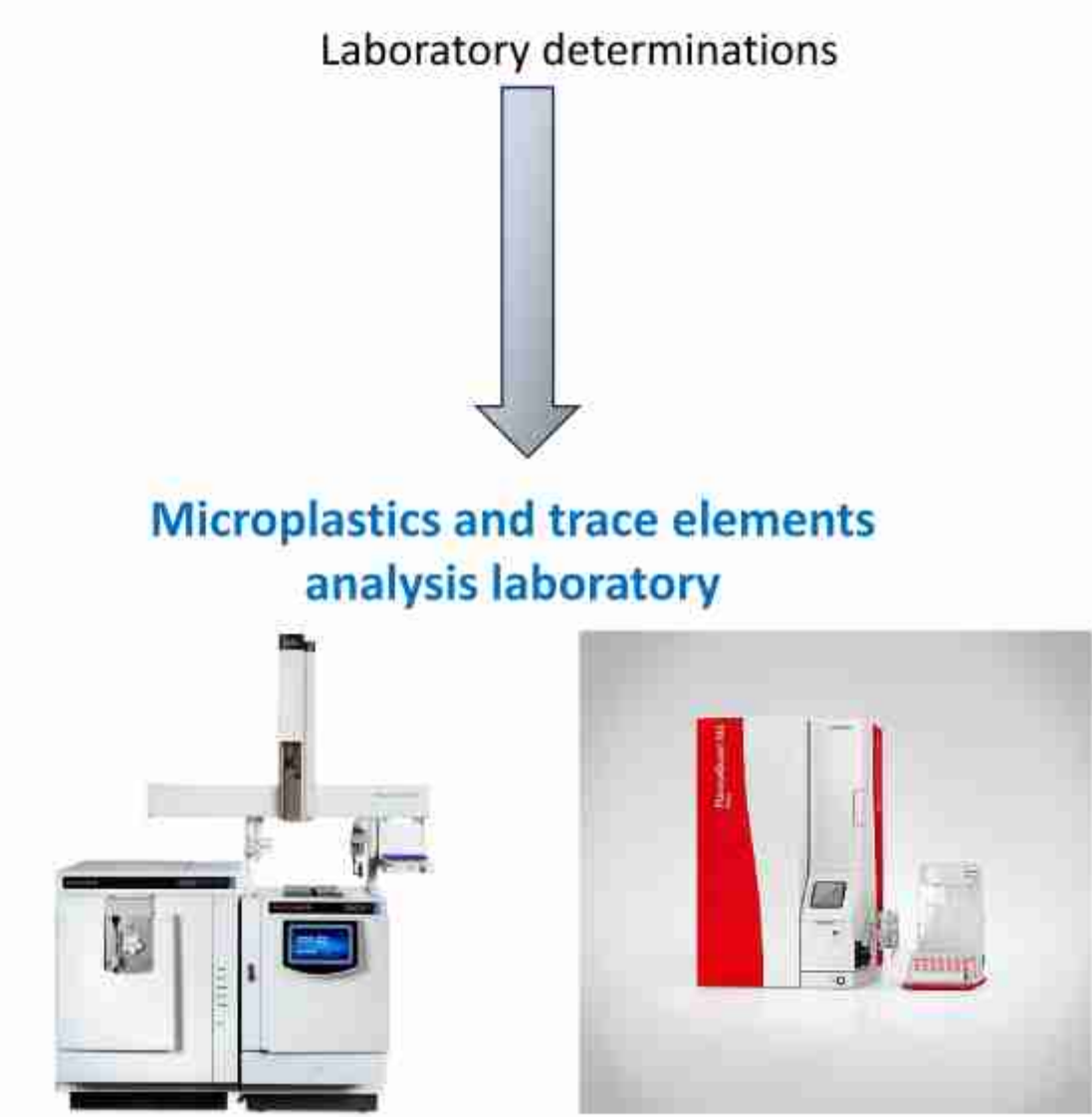
ESTABLISHMENT OF MONITORING SYSTEMS AND RAISE AWARENESS OF AIR POLLUTION



Two monitoring systems

Real-time monitoring
NO_x/NO₂/NO_x/NH₃, CO, O₃, SO₂/H₂S
PM₁₀, PM_{2.5} and PM₁
volatile aromatic hydrocarbons - BTEX
(benzene, toluene, ethylbenzene, xylene)

Laboratory determinations
Hg, PAHs,
Persistent Organic Pollutants (POPs),
including hexachlorobenzene (HCB),
polychlorinated biphenyls (PCBs),
dioxins and furans, and pesticides



- Beneficiaries:
- ☐ Local public authority
 - ☐ Regional and National public authority
 - ☐ Sectoral agency
 - ☐ Interest groups including NGOs
 - ☐ Higher education and research organisations
 - ☐ Education/training center and school
 - ☐ Enterprise
 - ☐ General public

Director proiect: prof.dr. Florin Crista
Echipa proiect: prof.dr. F. Imbrea, prof.dr. I. Radulov, prof.dr. L. Nita, prof.dr. I. Imbrea, prof.dr. L. Smuleac, conf.dr. I. Hotea, conf. dr. L. Botos, conf.dr. I. Banatean Dunea, s.i.dr. A. Berbecea, s.i. dr. A. Lato, as.dr. L. Crista, s.i.dr. S. Batrina



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PHYTORESIL – NATURAL SUPPLEMENT WITH POLYPHENOLS AND MICRONUTRIENT



University of Life Sciences “King Mihai I” from Timisoara, 300645, Timisoara, Romania,
Faculty of Food Engineering

Authors:

Mihaela LACATUS, Nicoleta HADARUGA, Mariana-Atena POIANA, Diana RABA, Delia DUMBRAVA, Camelia MOLDOVAN, Liana ALDA, Laura RADULESCU, Adrian RIVIS, Despina-Maria BORDEAN *

*Corresponding author, e-mail: despinabordean@usvt.ro; despina.bordean@gmail.com

Amaranthus retroflexus and *Chenopodium album* are plants traditionally used in food, valuable for their content of polyphenols and flavonoids with antioxidant and anti-inflammatory action. Their intake of minerals (Ca, Fe, Mg, Zn, K) and vitamins (C, E, beta-carotene) supports bone health, immunity, energy metabolism and cellular protection.

PhytoResil Premix is a standardized extract obtained from leaves and stems of *Chenopodium album* and *Amaranthus retroflexus*. It is presented in the form of a fine vegetable powder, with an olive-green hue and a slightly bitter taste, specific to vegetable raw materials. The product is concentrated in polyphenols and essential minerals, being designed as an active ingredient for food supplements and nutraceutical products. The extract is rich in bioactive compounds and essential minerals: total polyphenols (≥ 80 mg GAE/g), potassium ($\sim 10,465$ mg/100 g), calcium ($\sim 4,784$ mg/100 g), iron (~ 154 mg/100 g), zinc, manganese and copper. This combination supports electrolyte balance, energy metabolism, immune function and bone health, making it suitable as an ingredient for supplements and nutraceutical formulas.

PhytoResil Premix – Supplement Facts

One capsule contains 300 mg of PhytoResil Premix, a standardized extract rich in bioactive compounds and essential minerals. The product provides polyphenols as the main active component, recognized for their antioxidant action and their role in cell protection. The content of potassium, calcium, iron, zinc, manganese and copper contributes to maintaining electrolyte balance, supporting energy metabolism, immune function and bone health.



Figure 3. Premix Composition

Suggested Use

Adults: Take 1 capsule twice daily with meals. For increased support (elderly, high oxidative stress, athletes), take up to 2 capsules twice daily. Do not exceed 2 g/day ($\approx 6-7$ capsules).

Warnings

- Not recommended for children under 12 years.
- Pregnant or lactating women: consult your healthcare provider before use.
- Not suitable for individuals with kidney disease (risk of hyperkalemia).
- Supplements should not replace a balanced diet and healthy lifestyle.



Figure 1. *Amaranthus retroflexus* (Photos Mihaela Lăcătuș, 2025)



Figure 2. *Chenopodium album* (Photos Mihaela Lăcătuș, 2025)

Product description:

PhytoResil Premix is a fine plant-based powder obtained from leaves and stems of *Chenopodium album* and *Amaranthus retroflexus*. The product is standardized for its content of polyphenols and essential minerals, serving as a functional ingredient for dietary supplements and nutraceuticals.

- **Appearance:** fine, olive-green powder
- **Odor/Taste:** characteristic vegetal, slightly bitter
- **Moisture:** $\leq 8\%$
- **Solubility:** partially soluble in water
- **pH** (1% solution): 5.0–6.5

Main composition (indicative values)

Indicative Premix Composition (mg/100 g), (calculated as weighted mean from table data)

- Total polyphenols: ≥ 80 mg GAE/g
- K: 10465,4 mg
- Ca: 4783,9 mg
- Fe: 153,5 mg
- Zn: 10,6 mg
- Mn: 38,1 mg
- Cu: 1,9 mg

Recommended applications

- Dietary supplements: 200–500 mg/capsule
- Instant beverages / functional powders: 1–3 g/serving
- Solid formulations (bars, snacks, bakery): 2–5% of formula

Packaging and storage

- Packaging: multilayer pouches or bags, 5–25 kg
- Storage conditions: cool, dry, dark place, below 25°C
- Shelf life: 24 months from production date

Key advantages

- ✓ 100% natural, no synthetic additives
- ✓ Rich in polyphenols and essential minerals
- ✓ Suitable for nutraceutical and functional food applications

ACKNOWLEDGEMENTS

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INTESTINAL PARASITES IN WILD CARNIVORES FROM ROMANIA AND MOLECULAR IDENTIFICATION OF CESTODE SPECIES

Maria Monica Florina Moraru, Ana-Maria Marin, Dan-Cornel Popovici, Azzurra Santoro, Sorin Morariu, Kalman Imre, Narcisa Mederle

1Faculty of Veterinary Medicine, University of Life Sciences “King Mihai I” from Timisoara, 300645 Timisoara, Romania
2Forestry Faculty, Transilvania University Brasov, Sirul Beethoven, 500123 Brasov, Romania
3Department of Infectious Diseases, Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome, Italy

Wild carnivores are key hosts in the transmission and maintenance of numerous **zoonotic parasites**. In Romania, parasitological data regarding these species remain limited, particularly for helminths with **zoonotic potential**.

This **doctoral research project**, conducted under the supervision of **Prof. Narcisa Mederle**, aimed to perform a comprehensive **investigation** of the **parasitic load** in **wild mammals** from **Romania**.

A total of **441 wild mammals**, representing **11 host species**—including the **brown bear** (*Ursus arctos*), **grey wolf** (*Canis lupus*), **Eurasian lynx** (*Lynx lynx*), **Golden jackal** (*Canis aureus*), **Red fox** (*Vulpes vulpes*), **raccoon dog** (*Nyctereutes procyonoides*), **European wildcat** (*Felis silvestris*), **European badger** (*Meles meles*), **European polecat** (*Mustela putorius*), **Pine marten** (*Martes martes*), **Stone marten** (*Martes foina*)—were examined across **28 counties in Romania**.

Cestodes were detected in **7 host species**:

- Brown bear (*Ursus arctos*) – 1/115
- Grey wolf (*Canis lupus*) – 5/10
- Eurasian lynx (*Lynx lynx*) – 1/1
- Golden jackal (*Canis aureus*) – 29/83
- Red fox (*Vulpes vulpes*) – 72/161
- European wildcat (*Felis silvestris*)– 22/27
- European badger (*Meles meles*) – 7/22

With the highest prevalence recorded in the:

! **Red fox (*Vulpes vulpes*) – 44,71 %**

Notably, two cestode species were reported for the **first time in Romania**: ***Taenia arctos*** in the brown bear and ***Mesocostoides melesi*** in the badger.

These findings highlight the **diversity** and **epidemiological** importance of **cestodes** in **wild carnivores** and underscore the role of wildlife as reservoirs for parasites with zoonotic potential. The data **contribute** to the **understanding** of parasite-host relationships in **Romanian ecosystems** and emphasize the need for ongoing **surveillance at the wildlife-domestic animal-human interface**.



Acknowledgements: This research was conducted within the framework of the PhD thesis of Maria Monica Florina Moraru at the University of Life Sciences “King Mihai I” from Timișoara, Faculty of Veterinary Medicine, under the supervision of Professor Narcisa Mederle.

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